Geographic Review Panel 4 – San Joaquin River

Proposal number: 2001-C200 **Short Proposal Title:** Merced River Salmon Enhancement

1. Applicability to CALFED ERP Goals and Implementation Plan and CVPIA priorities, and relevance to ERP and CVPIA priorities for your region. This panel feels this full-scale implementation project is clearly applicable to both CALFED ERP Goals (1,2,3,4, and 5) and CVPIA-AFRP priorities. The project is intended to re-establish geomorphic processes via large-scale floodplain and channel manipulations to provide and maintain habitats that will increase and support populations of fall-run chinook salmon and floodplain riparian communities. The manipulations will reconnect the channel with its floodplain thereby contributing to the CALFED process (Goal 2) and habitat (Goal 4) goals and is aligned with the CVPIA-AFRP priority to focus on natural channel and riparian habitat values. Addressing these goals and priorities should support the increase and maintenance of naturally reproducing salmon population that has been in decline on the Merced River. Also, other riverine and riparian-dependent species should benefit from the action given the nature of re-establishing floodplain and riverine processes that will support the riparian and floodplain communities.

This river segment proposed for restoration is perhaps the most disturbed segment of the Merced River due to extensive mining and grazing activities, and further degradation as a result of the 1997 flood. The 1997 flood caused large-scale channel avulsion resulting in a complete river dysfunction throughout this 2-mile segment of river. Because of the upstream location of this site on the lower Merced River (RM42-44), it was once a substantial producer of fall-run chinook salmon. The Robinson Segment currently poses problems to upstream adult and downstream smolt migration and provides little salmon spawning and rearing habitat value. Also, and importantly, the Robinson restoration segment is the second segment in a four segment/4-mile reach of river that has been impacted by gravel mining and agricultural encroachments.

2. Linkages/coordination with previously funded projects or other restoration activities in your region. As mentioned above, this is a second phase of a four phased, 4-mile restoration plan for the Merced River. The first downstream pilot restoration segment (Ratzlaff Segment, RM 40-40.5) was re-constructed in the fall of 1999 with funds from CALFED, Four Pumps, and Tracy Mitigation funds. This second phase project is consistent with the Merced River Stakeholder and Restoration Planning process currently funded by the AFRP and CALFED, respectively. Important information on project design was obtained from the technical discussions with outside project reviewers for the Ratzlaff Project. Outside review from geomorphologists and ecologists has formally been incorporated into the Robinson Segment design process.

3. Feasibility, especially the project's ability to move forward in a timely and successful manner. The TARP comments that the project seems feasible in the short-term but the long-term prospects and need for intervention are unclear. This Panel believes this comment may lack insight on project design and the evolving nature of the

design. First, there will likely be the need for some long-term augmentation of coarse sediment to maintain the dynamic nature and function of the project, however, this is likely to be a component of any such project below a dam. This coarse sediment augmentation however will benefit from ongoing sediment transport experiments to identify gravel mobility and export rates pre- and post-project. Also, as part of the expanded nature of the project, material needed for long-term maintenance will come from the gravel reserves purchased as part of the project. Also, in the proposal there is mention of the need for berms to isolate the river from floodplain ponds on the downstream portion of the project. However, the existing design has eliminated the need for berms and off-channel ponds will be filled or be partially incorporated into the floodway design as oxbox habitats. This is only possible if the project is expanded per this proposal's request which will provide the acquisition of additional on site material. Thus, there should be no need for long-term dike maintenance as a result of degradation of the breech.

4. Qualifications of the applicants and others involved in implementing the proposed project. There is a good suite of agency personnel responsible for planning, design and implementation of the project. However, as has been learned from the past, a project of this magnitude and uncertainty can benefit from outside expertise. The TARP recommends that the team benefit from expertise with a stronger theoretical and research background. This Panel concurs with this comment and commends the project team for incorporating design review comments from outside experts through formal design meetings. The AFRP is currently developing an Adaptive Management Forum for Large Scale Channel Restoration Projects in cooperation with UC Davis' Information Center for the Environment, which when functional, should be a good venue for review and dissemination of project planning, implementation, and monitoring information.

5. Local involvement (including environmental compliance). This project has benefited from outstanding outreach to the local community via the Merced River Stakeholder Group, in addition to active participation by a very interested and active landowner, who also serves as a community leader within the Stakeholder Community. Because the project has already been partially funded, the environmental documentation and permit process is already well underway. Regulators from the USFWS and the ACOE have been taken to the site and briefed on the project in order inform decision-makers with regulatory authority. In addition, due to the extensive outreach already undertaken by project designers, the project has benefited from coordination with CALTRANS engineers responsible for designing the replacement bridge at the J59 crossing at the downstream end of this project segment and the upstream end of the Western Stone Project segment. This coordination has resulted in an extended bridge span that is more compatible with the restoration project objectives and reduce the river constriction and possibility of channel aggradation and degradation above and below the bridge, respectively.

6. Cost. Total cost of the expanded project is $7,875,901 of which $1,699,101 is still needed and which constitutes this funding request. Proponents take a cut at allocating funding between CALFED ($699,101) and AFRP ($1,000,000). An independent

technical reviewer makes the comment that this project cost appears higher than other similar projects. However, this Panel does not fully concur. A similar 1.5-mile restoration segment on the Tuolumne River, the Ruddy Segment of the Gravel Mining Reach (GMR), is estimated to cost about $6.3 million and the 3-mile 7/11 Segment of the GMR restoration project is estimated to cost about $7.2 million. Significant to the Robinson Segment on the Merced River is the amount of gravel material that will be purchased and protected on site, totaling about 1 million cubic yards, which is greater than the material needed or protected on the Tuolumne River projects. This Panel believes that the cost of this project is similar to those in the same geographic area.

7. Cost sharing. Existing funding commitments come from CALFED ($2,443,000), Four Pumps ($3,593,800), CDFG Prop 70 ($250,000), and CDFG Tracy Mitigation Funds ($250,000).

8. Additional comments. The TARP makes the comment that it is unclear how useful this project would be informationally to other regional efforts. Similar projects with somewhat different approaches, dictated by local conditions, are planned on the Tuolumne and Stanislaus rivers, and elsewhere throughout the Central Valley. In addition to a continued commitment on outside technical design review, this Panel believes that the applicability and informational value can be greatly expanded by exposing the Merced River Salmon Habitat Enhancement Project to a more regional review venue. A venue such as the Adaptive Management Forum for Large Scale Channel Restoration Projects that is under development by the AFRP is one such option. The intent this Forum is to use a multi-disciplinary panel of experts to review multiple large-scale projects, such as the Robinson Project, as they are designed, implemented and monitored. This higher level of review could expand the information value of such projects and provide monitoring and implementation insights that would enhance adaptive management and could potentially improve implementation of future project phases.

Regional Ranking

Panel Ranking: Medium high

Provide a brief explanation of your ranking: This Panel believes this project justifies a medium high ranking. The TARP ranked the project as Poor, but the individual reviewers ranked the project as good and very good. We reconcile this difference based on the regional importance of the project, the timeliness and local participation of the project, the linkage to previously funded projects. One important aspect of this proposal is acquiring land upstream of the project site which provides two benfits: (1) the upstream portion will perpetually be protected from mining that could jeopardize gains to date from five million dollars in restoration funds; and (2) will eliminate the need for incorporating dikes into the project design. Other TARP concerns are the need for outside technical expertise input and applicability to other regional efforts. We feel that the formal design review process that is underway in combination with some larger

review process will help insure that the ecological and informational benefits incumbent on such a large expenditure are realized.